



# Pancreatic Mass Removal and Biopsy

## Exocrine pancreatic tumors in Dogs & Cats?

### What are exocrine pancreatic tumors?

- The pancreas is a gland organ in the digestive and endocrine systems. It is both exocrine (secreting pancreatic juice containing digestive enzymes) and endocrine (producing several important hormones).
- Most pancreatic cancers are of epithelial origin and usually have metastasized to other organs by the time of diagnosis.

### How common are pancreatic tumors?

- Exocrine pancreatic cancer is very rare in dogs (<0.5% of all cancers) and uncommon in cats.

### What are the symptoms pancreatic tumors in cats and dogs?

- The symptoms of pancreatic cancer tend to be vague and nonspecific, including weight loss, anorexia, hair loss in cats, vomiting, abdominal distension due to mass effect, depression.

### How is the diagnosis made?

- Most **blood and biochemical** evaluations are nonspecific, evaluation of pancreatic enzymes are not consistent and most tumors are not easily felt upon physical examination.
- **Abdominal ultrasound** can be a useful diagnostic tool for localization of the pancreatic tumor and evaluation whether the cancer spread to the liver and regional lymph nodes.

- **Advanced imaging** such as CT and MRI have not been fully evaluated for pets with pancreatic cancer but as they become more available, they may provide valuable assessment of the animals' condition.

### **Does cancer cause pain in pets?**

- Pain is common in pets with cancer, with some tumors causing more pain than others. In addition to pain caused by the actual tumors, pets will also experience pain associated with cancer treatments such as surgery, radiation therapy or chemotherapy.
- Untreated pain decreases the pet's quality of life, and prolongs recovery from the illness, treatment or injury. It is, therefore, essential that veterinary teams that are taking care of pets with cancer should also play a vital role in educating pet owners about recognizing and managing pain in their pets.
- The best way to manage cancer pain in pets is to prevent it, a term referred to as preemptive pain management. This strategy anticipates pain ahead of time and administers pain medication before the pet actually experiences pain, thus ensuring the pet's maximum comfort.

### **How important is nutritional support for pets with cancer?**

- Cancer cachexia (a term referring to progressive severe weight loss) is frequently observed in pets with cancer. Pets with cancer lose weight partly because of lack of appetite and partly because of cancer-induced altered metabolism.
- Some of the causes for decreased appetite are related to the cancer itself (for example, tumors may physically interfere with food chewing, swallowing, and digestion process) and some may be related to the side effects of cancer treatment (for example, some chemotherapy drugs cause nausea and vomiting, and radiation therapy can cause mouth inflammation).
- Proper nutrition while undergoing cancer treatment is essential to maintain your pet's strength, improve survival times, quality of life and maximize response to therapy. Adequate nutritional support was shown to decrease the duration of hospitalization, reduce post-surgery complications and enhance the healing process.
- Additionally, pets with cancer need to be fed diets specifically designed to provide maximum benefit and nutritional support for the patient..

### **What are the treatment options for pancreatic cancer in cats and dogs?**

- Most nonislet cell cancers in the pancreas metastasize to the regional lymph nodes and liver, or have become invasive at the time of diagnosis.
- If the cancer has spread, surgery is not typically performed. While surgical removal of the pancreas has been performed in both humans and dogs, it carries a high risk of morbidity and mortality without providing any significant cure benefit.
- If bowel obstruction is inevitable as the tumor grows, gastrointestinal bypass surgery may be a short-term option to reduce the severity of the disease.

- Chemotherapy and radiation have shown limited value for both humans and animals.

**What is the prognosis for cats and dogs with pancreatic cancer?**

- Unfortunately, the prognosis of pets (and humans) diagnosed with pancreatic cancer is very poor due to the critical location of the disease and the advanced stage typically seen at diagnosis.
- Regardless of treatment, one-year survival after diagnosis has not been reported.